# Teoria da Computação - X Workshop de Verão em Matemática

XV Seminário Informal(, mas Formal!) do GTC/UnB

Local: **Miniauditório do MAT**

Programação

	21/02/2018 (Quarta-Feira)	22/02/2017 (Quinta-Feira)
10:00 - 10:30	*coffee-break*	*coffee-break*
10:30 - 11:30	IS- Edward Hermann	IS-Mário Benevides
11:30 - 12:00	Bruno Delboni	Washington Carvalho
12:00 - 14:30	*almoço*	*almoço*
14:30 - 15:30	IS- Bruno Lopes	IS- Marcelo Finger
15:30 - 16:00	Thiago Ramos	Daniel Saad
16:00 - 16:30	*coffee-break*	*coffee-break*
16:30 - 17:00	Deivid Vale	Luiz Antonio
17:01 -	H.H.	H.H.
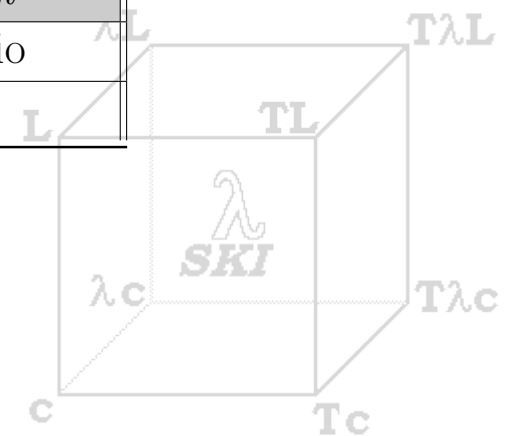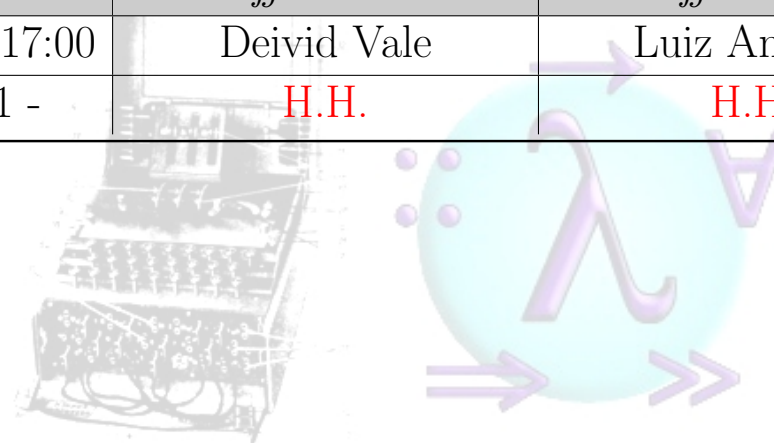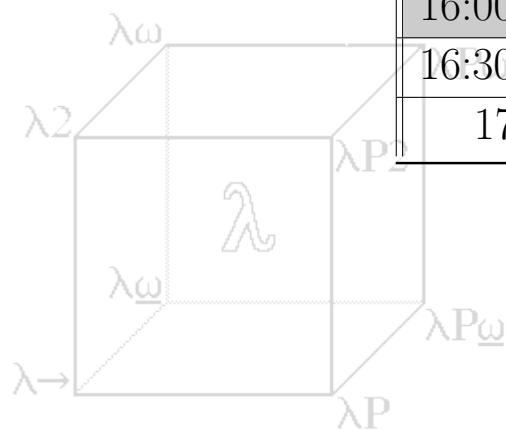
Palestras

**I.S.** **Tamanho de Provas Lgicas e Complexidade Computacional**

Prof. Edward Hermann Haeusler, PUC-RIO.

Resumo: Discutiremos a relao entre o tamanho de provas lgicas sob o ponto de vista da Com- plexidade Computacional. Mtodos baseados em Teoria da Prova para a obteno de provas curtas sero apresentados e discutidas as implicaes de sua abrangncia.

I.S. **Some Extensions of Propositional Dynamic Logic**

Prof. Mário Benevides, UFRJ

Resumo: In this talk we present some extension of Propositional Dynamic Logic. First we introduce a Dynamic Logic in which the programs are CCS (Calculus for Communicating Systems) and pi- Calculus specifications. We discuss how to match the notion of bisimulation between two processes in CCS with the notion of logically equivalent processes in PDL. Second, we introduce another Dynamic Logic for reasoning about Petri Nets. Finally, we briefly discuss other possibilities to extend PDL, for instance adding data structure to PDL.
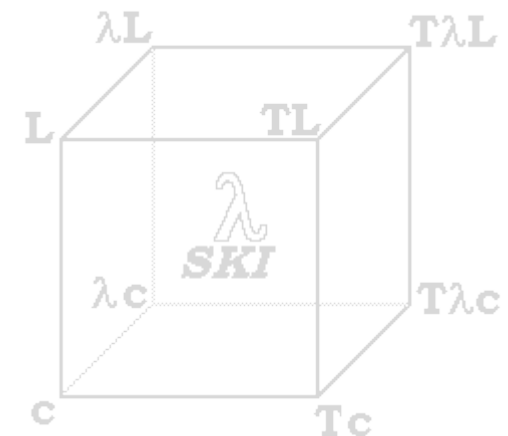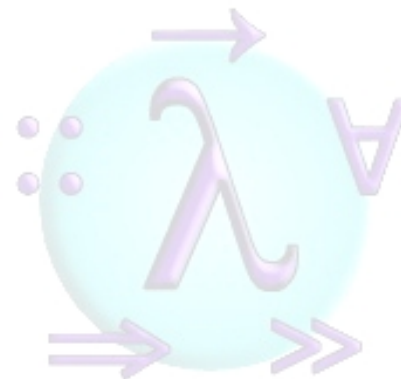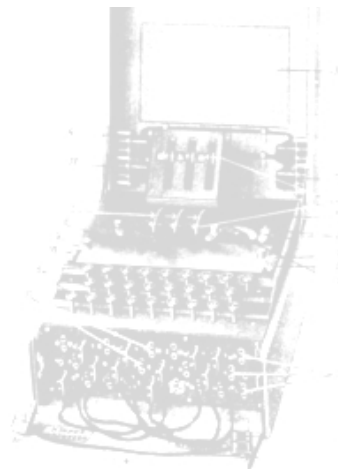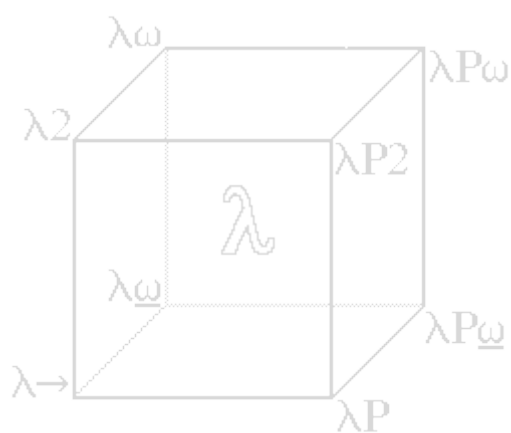
Palestras

**I.S.** **Towards reasoning about Petri nets: a Propositional Dynamic Logic based approach**

Bruno Lopes, UFF

Resumo: We present the last results over a Dynamic Logic approach with iteration to reason about Petri nets. This new operator allows for representing more general networks and thus enhancing the former propositional logic for Petri nets. We discuss an axiomatization and a new semantics with soundness and completeness, some complexity results and a linear model checking algorithm

I.S. **Quantitative Logic Reasoning**

Marcelo Finger, IME-USP

Resumo: We present a research program which investigates the intersection of deductive reasoning with explicit quantitative capabilities. These quantitative capabilities encompass probabilistic reasoning, counting and counting quantifiers, and similar systems. The need to have a combined reasoning system that enables a unified way to reason with quantities has always been recognized in modern logic, as proposals of logic probabilistic reasoning are present in the work of Boole [1854]. Equally ubiquitous is the need to deal with cardinality restrictions on finite sets. We show that there is a common way to deal with these several deductive quantitative capabilities, involving a framework based on Linear Algebras and Linear Programming, and the distinction between probabilistic and cardinality reasoning arising from the different family of algebras employed. The quantitative logic systems are particularly amenable to the introduction of inconsistency measurements, which quantify the degree of inconsistency of a given quantitative logic theory, following some basic principles of inconsistency measurements.
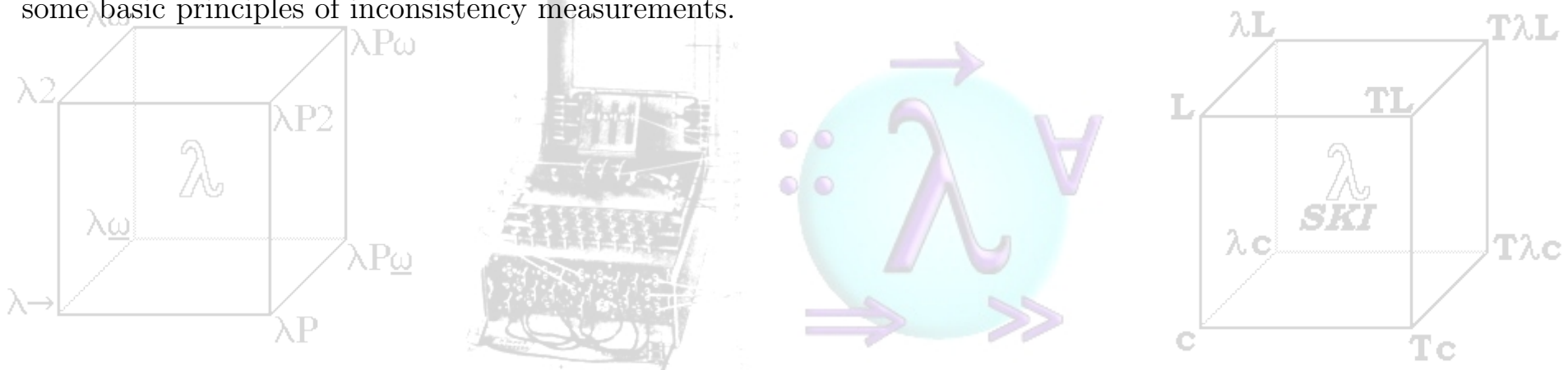
Palestras de 30 min

* **Correspondência entre λ-termos Lineares e Grafos Trivalentes Com Raiz.**
    Bruno Delboni (bolsista CAPES), doutorado, MAT-UnB

* **Nominal matching modulo A, C and AC.**
    Washington R. de Carvalho Segundo, doutorado, CIC-UnB

* **Formalization of the Undecidability of the Halting Problem for a Functional Language.**
    Thiago M. Ferreira Ramos, doutorado, CIC-UnB

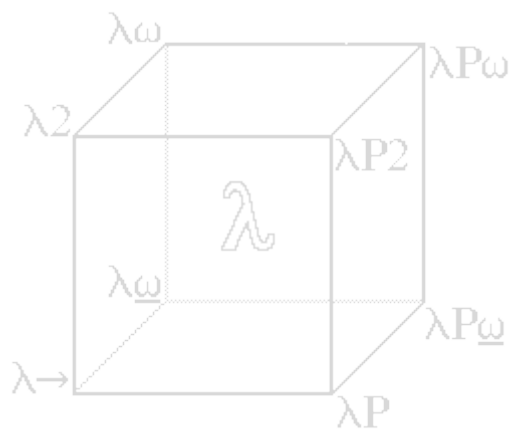* **A Grammar Compression Algorithm Based on Induced Suffix Sorting.**
    Daniel Saad, doutorado, CIC-UnB

* **O Problema de Unificação sobre $\text{ACUN}_p(\text{h})$ e Grupos Abelianos.**
    Deivid Vale, mestrado, MAT-UnB

* **Sequential x Concurrent Processes.**
    Luiz Antonio Martins, PIBIC, MAT-UnB

http://ayala.mat.unb.br/TCgroup/events.html